# Data Sheet (Cat.No.TMPY-01300)

TargetMol

## EpCAM/TROP1 Protein, Human, Recombinant (His)

### General Information

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| Synonyms: | TROP-1;ESA;EGP40;HNPCC8;EGP314;M4S1;epithelial cell adhesion molecule;MK-1;MIC18; DIAR5;EGP-2;KS1/4;TACSTD1;TROP1;KSA |
| Protein Construction: | A DNA sequence encoding the extracellular domain (Met1-Lys265) of human EpCAM (NP_002345.1) was fused with a polyhistidine tag at the C-terminus. Predicted N terminal: Gln 24 |
| Species: | Human |
| Expression Host: | HEK293 Cells |
| Accession: | P16422 |
| Molecular Weight: | 28.84 kDa (predicted); 36.5 kDa (reducing condition, due to glycosylation) |

### QC Testing

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| Biological Activity: | Measured by the ability of the immobilized protein to support the adhesion of NIH-3T3 mouse embryonic fibroblast cells. When cells are added to EpCAM-His coated plates (1.25μg/mL, 100μL/well), approximately >40% will adhere specifically after 30 minutes at 37℃. |
| Purity: | > 96 % as determined by SDS-PAGE. ≥ 90 % as determined by SEC-HPLC. |
| Endotoxin: | < 1.0 EU/μg of the protein as determined by the LAL method. |
| Formulation: | Lyophilized from a solution filtered through a 0.22 μm filter, containing PBS, pH 7.4. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization. |

### Preparation and Storage

Reconstitution:

Reconstituted with sterile deionized water to 0.25 mg/mL. Reconstitution conditions may vary depending on the lot.

Stability & Storage:

It is recommended to store recombinant proteins at -20℃ to -80℃ for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80℃. For reconstituted protein solutions, the solution can be stored at -20℃ to -80℃ for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

### Protein Background

Epithelial Cell Adhesion Molecule (EpCAM), also known as GA733-2 antigen, is a type I transmembrane glycoprotein composed of an extracellular domain with two EGF-Like repeats and a cystenin-rich region, a

transmembrane domain and a cytoplasmic domain. It modulates cell adhesion and proliferation. Its overexpression has been detected in many epithelial tumours and has been associated with high stage, high grade and a worse survival in some tumour types. EpCAM has been shown to function as a calcium-independent homophilic cell adhesion molecule that does not exhibit any obvious relationship to the four known cell adhesion molecule superfamilies. However, recent insights have revealed that EpCAM participates in not only cell adhesion, but also in proliferation, migration and differentiation of cells. In addition, recent study revealed that EpCAM is the Wnt-beta-catenin signaling target gene and may be used to facilitate prognosis. It has oncogenic potential and is activated by release of its intracellular domain, which can signal into the cell nucleus by engagement of elements of the wnt pathway.Cancer ImmunotherapyImmune CheckpointImmunotherapyTargeted Therapy

Reference

Brunner A, et al. (2008) EpCAM is predominantly expressed in high grade and advanced stage urothelial carcinoma of the bladder. J Clin Pathol. 61(3):307-10.
Trzpis M, et al. (2008) EpCAM in morphogenesis. Front Biosci. 13: 5050-5.
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Munz M, et al. (2009) The emerging role of EpCAM in cancer and stem cell signaling. Cancer Res. 69(14): 5627-9.